

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

~~ADSM~~ Re Appellant:

ALLAN A. JAMES

Serial. No.: 09/733,286

Filed: December 8, 2000

For: BLISTER-RESISTANT MOLDED
POLYUREA POLYMER AND
METHOD OF MAKING A
BLISTER-RESISTANT MOLDED
POLYUREA POLYMER

Group Art Unit: 1711

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TC 1700

Examiner: R. Sergeant

Attorney Docket No.: 019131.03130

APPEAL BRIEF

Honorable Commissioner of
Patents and Trademarks
Washington, DC 20231
Dear Sir:

Appellant hereby submits this Appeal Brief, in triplicate, with the requisite fee as set forth in 37 C.F.R. § 1.17(c). A Notice of Appeal, together with a Petition for Extension of Time, was filed on December 2, 2002. This Appeal Brief is accordingly timely filed. The requisite fee set forth in 37 C.F.R. § 1.17(c) may be debited from the Deposit Account 12-1322 (Ref. No.: 019131/03130).



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TC 1700

Examiner: R. Sargent

Attorney Docket No.: 019131.03130

***For:* BLISTER-RESISTANT MOLDED
POLYUREA POLYMER AND
METHOD OF MAKING A
BLISTER-RESISTANT MOLDED
POLYUREA POLYMER**

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Attorney Docket No.: 019131.03130

I. REAL PARTY IN INTEREST

The real party in interest in this appeal is Dow Global Technologies, Inc., a corporation formed under the laws of the United States, located at 2030 Dow Center, Midland, Michigan, 48642, to whom this application has been assigned.

II. RELATED APPEALS AND INTERFERENCES

No related appeals or interferences exist.

III. STATUS OF CLAIMS

As originally filed, this application contained Claims 1-32. Claims 33-45 were added in response to the non-final Office Action dated October 16, 2001. In the same response Claims 1-16, 20, and 26-32 were cancelled. Consequently, Claims 17-19, 21-25, and 33-45 are pending in this application. Claims 17-19, 21-25, and 33-45 have been rejected by the Examiner, on grounds discussed herein.

Accordingly, the claims on appeal are Claims 17-19, 21-25, and 33-45. A copy of the claims on appeal is set forth in the *Appendix*. Each of these claims stands finally rejected for which Appellant brings the present appeal to the Board.

IV. STATUS OF AMENDMENT

No amendments were made subsequent to a final rejection. All amendments were made prior to a final rejection in the response to the non-final Office Action dated October 16, 2001, and they have been entered into the record and considered by the Examiner.

V. SUMMARY OF INVENTION

Appellant's claims are directed towards a novel (i.) method of improving blister resistance of polyurea-polymers, (ii.) a blister-resistant molded automobile body part; and (iii.) a

method of making blister-resistant molded automobile body parts. Each of the claims encompasses the addition of jojoba oil to polyurea. Table 1 and Table 2 of the originally filed application demonstrate the unexpected results obtained by the addition of jojoba oil to polyurea. See pgs. 20-21. In particular, note the superior results of a molded mixture that contains 1.5% jojoba oil when exposed to moisture and temperature of at least 390°F. These tables compare similar compositions not containing the low level of jojoba oil. The added jojoba oil substantially reduces blistering as seen in Table 2.

VI. ISSUES

The issues on appeal are premised on the grounds of rejection set forth on page 2 of the Advisory Action dated October 25, 2002 and the Final Office Action dated June 4, 2002 as referenced in the Advisory Action. The issues are as follows:

1. Whether Claims 17, 18, 21-25, and 35 are anticipated under 35 U.S.C. § 102 (b) by WO 96/22182 ("*Muenstermann*").
2. Whether Claims 19, 33, 34, and 36-45 are unpatentable under 35 U.S.C. § 103 (a) over *Muenstermann* in view of U.S. Patent No. 5,525,681 ("*Barron*").

VII. GROUPING OF THE CLAIMS

1. For purposes of the anticipation rejection under 35 U.S.C. § 102 (b) of *Muenstermann*, Claims 17, 21-23, 25, and 35 stand or fall together. Claims 18 and 24 stand or fall by themselves.
2. For purposes of the obviousness rejection under 35 U.S.C. § 103 (a) Claims 19, 33, 34, and 36-45 stand and fall together.

VIII. ARGUMENTS

A. **The Examiner Has Improperly Maintained the Rejection of Claims 17, 18, 21-25, and 35 under 35 U.S.C. §102(b).**

Muenstermann does not anticipate the present application. To anticipate a claim, a reference must disclose every limitation of the claimed invention either explicitly or inherently. *In re Schreiber*, 128 F.3d 1473, 1477, 44 U.S.P.Q.2d 1429, 1431.

1. **The Examiner has failed to recognize that the present invention is a proper method of use claim.**

Claims 17, 18, 21-25, and 35 of the application are method of use claims, not composition claims. Claims directed to a method of use are patentable if the claimed usage is previously unknown. *See* 35 U.S.C. §101; *see also In re Hack*, 245 F.2d 246, 248, 114 U.S.P.Q. 161, 163 (C.C.P.A. 1957) (holding that a discovery or invention of a *new use* of a known process, machine, manufacture, composition of matter or material may be patentable). Section 100(b) defines process as a “process, art, or method, and *includes a new use of a* known process, machine, manufacture, *composition of matter, or material.*” 35 U.S.C. § 100 (emphasis added). Section 101 states that “whoever invents or discovers any new and useful process” is entitled to obtain a patent. 35 U.S.C. § 101. Furthermore “as a matter of claim drafting, therefore, the discoverer of a new use must protect his discovery by means of process or method claims and not product claims.” *In re Hack*, 245 F.2d at 248.

Claims 17, 18, 21-25, and 35 of the present application are directed to a novel method of improving blister resistance. *Muenstermann* discloses an internal release composition for molded polymer, which may contain jojoba oil. *Muenstermann* discloses that the mixture of “a metal salt of a carboxylic acid and jojoba oil performs not only as an effective internal mould release agent but also does not degrade the polyurethane catalyst in fully formulated RIM

system.” p.4, ll. 8-10. *Muenstermann* does not disclose that blister resistance may be increased by the presence of the jojoba oil in the formulation. As such, *Muenstermann* does not anticipate the present application because it fails to disclose:

- a.) improvement of a molded polyurea’s blister resistance by the use of jojoba oil;
- b.) at a temperature of at least 390°F; and
- c.) for a period of time of at least 20 minutes and no longer than 60 minutes.

Each of these limitations is set forth in Claims 17, 18, 21-25 and 35. These elements are clearly not disclosed within *Muenstermann*. Therefore, *Muenstermann* does not anticipate the present application.

2. The Examiner has improperly maintained that the properties are inherent.

The Examiner states, “one would logically expect the compositions to inherently meet the anti-blistering characteristics of the instant compositions.” Par. 3 of Final Office Action. The fact that a certain result or characteristic may occur or be present in the prior art is not sufficient to establish the inherency of the characteristic. *In re Rijckaert*, 9 F.3d 1531, 1534, 28 U.S.P.Q.2d 1955, 1957 (Fed. Cir. 1993). “The extrinsic evidence, ‘must make clear that the missing descriptive matter is necessarily present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill.’” *In re Robertson*, 169 F.3d 743, 745, 49 U.S.P.Q.2d 1949, 1950-51 (Fed. Cir. 1999) (*quoting Continental Can Co. v. Monsanto Co.*, 948 F.2d 1264, 1268, 20 U.S.P.Q.2d 1746, 1749 (Fed. Cir. 1991)).

a. The Examiner has not met his burden.

The Examiner bears the initial burden of a rejection based on inherency. *Ex parte Levy*, 17 U.S.P.Q.2d 1461, 1464 (Bd. Pat. App. & Int. 1990). The Examiner has failed to meet that

burden by not providing “a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teachings of the applied prior art.” *Ex parte Levy*, 17 U.S.P.Q.2d 1461, 1464 (Bd. Pat. App. & Int. 1990). The Examiner has merely stated that “one would logically expect” the characteristics to be present. A logical expectation is not a “basis in fact and/or technical reasoning”. The Examiner has not provided this basis and therefore has failed to meet his burden.

b. Blister-resistance is not inherent.

The anti-blistering characteristic of polyurea polymer with jojoba oil is not inherent in *Muenstermann*. *Muenstermann* does not hint, much less disclose, the ability of jojoba oil to affect blistering. Rather, *Muenstermann* merely discloses a method of making a molded polymer more easily removable from its mold. *Muenstermann* has no relation to the claims of Appellant; one skilled in the art of polyurea polymers would not look to *Muenstermann* to solve the problem related to blistering.

In order to maintain the Examiner’s inherency argument, anti-blistering must necessarily be present in the reference and must be recognized by persons of ordinary skill to be inherent. *See In re Robertson* at 1950-51. Assuming arguendo that the Examiner has met his burden, the results of the anti-blistering by the claimed jojoba oil containing composition are unexpected. Therefore, the evidence shows that a person of ordinary skill would not have recognized the ability of jojoba oil to enhance blister-resistance based on the disclosures in *Muenstermann*. Table 1 and Table 2 of the originally filed application demonstrate the unexpected results obtained by the addition of jojoba oil to polyurea. *See pp. 20-21*. In particular, note the superior results of a molded mixture that contains 1.5% jojoba oil when exposed to moisture and temperature of at least 390°F versus a composition void of jojoba oil. The added jojoba oil

substantially reduces blistering as seen in Table 2. Because the results of adding jojoba oil are unexpected, the anti-blistering characteristic could not have been inherent within the disclosure of *Muenstermann*.

In summary, Claims 17, 18, 21-25, and 35 are drawn to a novel method of improving blister resistance of polyurea-polymers and not the polyurea-polymers themselves. Blister resistance is not an inherent trait of the polyurea-polymers. Blister resistance is an unexpected result that one skilled in the art could not have predicted. Therefore, *Muenstermann* does not anticipate the present application.

c. Claims 18 and 24 Do Not Stand or Fall with the Other Claims

Even if independent Claim 17 is anticipated by *Muenstermann*, which it is not, dependent Claims 18 and 24 are not anticipated by *Muenstermann*. Claim 18 is directed to a polyurea-polymer mixture having an isocyanate index between 1.05 and 1.40. *Muenstermann* does not recite the isocyanate index. It is known that isocyanate level affects blistering but as the level increases the compound becomes more brittle. See Specification p.16, line 4 – 8. The present invention allows the isocyanate level to be increased without increasing brittleness. *Muenstermann* does not disclose the claimed isocyanate index, therefore it does not anticipate.

In addition, Claim 24 is not anticipated by *Muenstermann* because *Muenstermann* fails to disclose the ability of the polyurea, when exposed to mixture, taking up no more than 2 weight percent water based on the weight of the molded polyurea polymer.

B. The Examiner Has Improperly Maintained the Rejection of Claims 19, 33, 34, and 36-45 under 35 U.S.C. §103(a).

The Examiner admits that *Muenstermann* fails to recite use of a polyurea formulation in the production of automobile parts as well as the addition of polyepoxides to the polyurea formulation. See Par. 6 of the final Office Action. The Examiner argues that it would have been

obvious to combine *Muenstermann* with *Barron* because *Barron* “discloses that automobile parts are fabricated from polyurea RIM compositions.” See Par. 6 of the final Office Action.

1. The Examiner has not shown a proper motivation for the cited combination.

When considering an obviousness rejection, the Examiner cannot “pick and choose among the individual elements of assorted prior art references to recreate the claimed invention,” but rather, the Examiner must look for “some teaching or suggestion in the references to support their use in the particular claimed combination.” See *SmithKline Diagnostics, Inc. v. Helena Lab. Corp.*, 859 F.2d 878, 887 (Fed. Cir. 1988). The Examiner has not provided a proper motivation to combine the cited references. *Muenstermann* and *Barron* attempt to solve two different issues. *Muenstermann* is directed to an internal release composition for polyurethane molding. *Barron* recites a more stable, blister-resistant polyurethane. The problems presented in the two references are distinctly different, such that one skilled in the art would not look to one for improvement of the other. If one of skill in the art wanted to go outside *Barron* for assistance, they would not look to *Muenstermann*, which does not disclose or teach a better method of blister-resistance. *Pro-Mold and Tool Co. v. Great Lakes Plastics, Inc.*, 75 F.3d 1568, 1573 (Fed. Cir. 1996) (citing *ACS Hosp. Sys.*, 732 F.2d 1572, 1577 (Fed. Cir. 1984). (“It is well established that before a conclusion of obviousness may be made based on a combination of references, there must have been a reason, suggestion, or motivation to lead an inventor to combine those references.”))

2. The combined references fail to disclose the present invention.

Independent Claim 36 is directed to a “blister-resistant molded automobile body part ... such that when said molded automobile body part is exposed to moisture and a temperature of at least about 390°F (199°C), said molded automobile body part is substantially free of blisters”

Independent Claim 41 is directed to a “method of making a blister-resistant molded automobile body part” including jojoba oil in an amount “effective for providing blister resistant to said molded automobile body part such that when said molded automobile body part is exposed to moisture and a temperature of at least about 390°F (199°C), said automobile body part is substantially free of blisters.” As set forth *supra*, Table 2 on page 21 of the originally filed specification demonstrates no improvement in blistering when the oven temperature is set at 375°F (190°C) as compared to the oven temperature set at 390°F (199°C). This demonstrates the critical nature of the oven temperature. Even if the combination of *Muenstermann* and *Barron* were proper, which it is not, the combination would not contain the claim limitations to the critical temperature of 390°F (199°C).

The present application is not obvious over *Muenstermann* in view of *Barron*. First, the Examiner has not shown a proper motivation to combine the references. Second, *Barron* does not cure the defects contained within *Muenstermann*, as the combination does not teach all of the elements of the present invention. Consequently, this combination does not render the current application obvious.

IX. CONCLUSION

The rejections of:

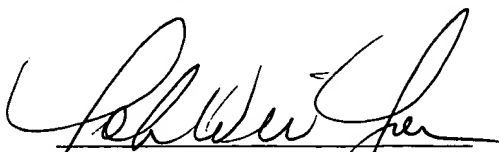
- Claims 17, 18, 21-25, and 35 as anticipated under 35 U.S.C. § 102 (b) by WO 96/22182 (“*Muenstermann*”); and
- Claims 19, 33, 34, and 36-45 under 35 U.S.C. § 103 (a) as being unpatentable over *Muenstermann* in view of U.S. Patent No. 5,525,681 (“*Barron*”)

are improper for the reasons discussed herein. Accordingly, Claims 17-19, 21-25, and 33-45 are in a condition for allowance.

A decision of the Board consistent with this showing is earnestly requested.

Respectfully submitted,

Date: 05/28/2003



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I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Assistant Commissioner for Patents, Washington, D.C. 20231, on May 29, 2003.



JANA WALRAVEN

APPENDIX

CLAIMS ON APPEAL

17. A method of improving a molded polyurea polymer's blister resistance, said method comprising:

(A) adding an effective amount of a fatty acid ester to a polyisocyanate and an isocyanate-reactive material to prepare a polyurea-polymer mixture, said fatty-acid ester being jojoba oil; and

(B) molding said mixture to prepare a molded polyurea polymer, wherein said molded mixture is substantially free of blisters and has improved blister resistance, as compared to a molded mixture that is substantially free of jojoba oil, when exposed to moisture and a temperature of at least about 390°F (199°C), said molded polyurea polymer being exposed to said temperature for at least 20 minutes and no longer than 60 minutes.

18. The method of Claim 17, wherein said mixture has an isocyanate index between 1.05 and 1.40.

19. The method of Claim 17, wherein said mixture further comprises a polyepoxide.

21. The method Claim 17, wherein said isocyanate-reactive material is at least one of a polyamine and a polyol.

22. The method of Claim 17, wherein said fatty-acid ester is present in an amount of at least 0.5 weight percent based on the weight of said mixture excluding the weight of said polyisocyanate.

23. The method of Claim 17, wherein said molded mixture is substantially free of blisters and has improved blister resistance, as compared to a molded mixture that is substantially free of jojoba oil, when exposed to a temperature of at least about 400°F (204°C).

24. The method of Claim 17, wherein when said molded polyurea polymer is exposed to moisture, said molded polyurea polymer takes up no more than 2 weight-percent water based on the weight of said molded polyurea polymer.

25. The method of Claim 17, wherein said mixture is molded by reaction injection molding.

33. The method of Claim 17, wherein said molded polyurea polymer is an automobile body part.

34. The method of Claim 33, wherein said automobile body part is automobile fascia or automobile body panels.

35. The method of Claim 17, wherein said fatty-acid ester is added in an amount of no more than about 5.0 weight percent based on the weight of said mixture excluding the weight of said polyisocyanate.

36. A blister-resistant molded automobile body part prepared by a method comprising:

(A) admixing a polyisocyanate, an isocyanate-reactive material, and a fatty-acid ester to form a polyurea-polymer mixture, said fatty-acid ester being jojoba oil; and

(B) molding said mixture using reaction injection molding to form a molded automobile body part,

wherein said mixture contains said fatty-acid ester in an amount of no more than about 5.0 weight percent based on the weight of said mixture excluding the weight of said polyisocyanate, said amount being effective for providing blister resistance to said molded automobile body part such that when said molded automobile body part is exposed to moisture

and a temperature of at least about 390°F (199°C), said molded automobile body part is substantially free of blisters.

37. The molded automobile body part of Claim 36, wherein said isocyanate-reactive material is at least one of a polyamine and a polyol.

38. The molded automobile body part of Claim 36, wherein at least one additive is further admixed with said polyurea-polymer mixture, said additive being at least one of a chain extender, a catalyst, a surfactant, and an internal-mold-release agent.

39. The molded automobile body part of Claim 36, wherein a polyepoxide is further admixed with said polyurea-polymer mixture.

40. The molded automobile body part of Claim 36, wherein said fatty-acid ester is present in an amount of at least about 0.5 weight percent but no more than about 3.0 weight percent based on the weight of said mixture excluding the weight of said polyisocyanate.

41. A method of making a blister-resistant molded automobile body part, said method comprising:

(A) admixing a polyisocyanate, an isocyanate-reactive material, and a fatty-acid ester to form a polyurea-polymer mixture, said fatty-acid ester being jojoba oil; and

(B) molding said mixture using reaction injection molding to form a molded automobile body part,

wherein said mixture contains said fatty-acid ester in an amount of no more than about 5.0 weight percent based on the weight of said mixture excluding the weight of said polyisocyanate, said amount being effective for providing blister resistance to said molded automobile body part such that when said molded automobile body part is exposed to moisture

and a temperature of at least about 390°F (199°C), said molded automobile body part is substantially free of blisters.

42. The method of Claim 41, wherein said isocyanate-reactive material is at least one of a polyamine and a polyol.

43. The method of Claim 41 further comprising admixing at least one additive with said polyurea-polymer mixture, said additive being at least one of a chain extender, a catalyst, a surfactant, and an internal-mold-release agent.

44. The method of Claim 41 further comprising admixing a polyepoxide with said polyurea-polymer mixture.

45. The method of Claim 41, wherein said fatty-acid ester is present in an amount of at least about 0.5 weight percent but no more than about 3.0 weight percent based on the weight of said mixture excluding the weight of said polyisocyanate.